

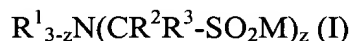
REMARKS/ARGUMENTS

Entry of this amendment and favorable reconsideration of this application is requested.

Claims 1-8 and 11-14 are in the case.

The Examiner has withdrawn her rejection of the claims under 35 U.S.C. § 102 and §103 over Beckmann et al., but maintains her rejection of Claims 1-8, 11 and 12 under 35 U.S.C. § 103 over Fono in view of Beckmann et al., now also rejecting Claim 13 under 35 U.S.C. § 103(a) as unpatentable over Fono in view of Beckmann et al. and further in view of newly cited Olip et al.

These rejections are traversed. Specifically, the invention relates to a process for controlled partial decolorization of vat- or sulfur-dyed or -printed textile material, which comprises treating the textile material to be lightened or decolorized with one or more compounds of the formula I



where

z is 1, 2 or 3,

R<sup>1</sup> is

a) when z is 1 or 2: hydrogen, alkyl of 1 to 18 carbon atoms or HOCH<sub>2</sub>CH<sub>2</sub>,

b) when z is 2: additionally OH, and

c) when z is 1: either as defined under a) independently for the two R<sup>1</sup> radicals or as defined under a) in one instance and as defined under b) in the other,

R<sup>2</sup> and R<sup>3</sup>, which may be the same or different, are each hydrogen or alkyl of 1 to 4 carbon atoms subject to the proviso that together they have not more than 4 carbon atoms, and

M is one equivalent of a mono- or divalent metal atom,

at pH 4 - 7, optionally followed by an aftertreatment with hydrogen peroxide.

Fono, on the other hand, the primary reference relied upon by the Examiner, is directed to a process of stripping dyes from textile fabric, not to a process for controlled partial decolorization of vat- or sulfur-dyed or printed textile materials, as claimed.

Distinctly and materially different procedures thus are involved. Stripping, as in Fono, is not the aim and objective of the claimed invention, Applicants' discovery relating to substantially different controlled partial decolorization of dyed or printed textile material to be lightened or decolorized. Such controlled partial decolorization manifestly is not comparable to a process of stripping dyes from a textile material. How then can it reasonably be said that Applicants' discovery is obvious from Fono, the objective and results of the claimed invention being different and nonanalogous from the objective and results obtained by the process of Fono? Manifestly, such is not a reasonable conclusion.

Further, it is apparent from Fono that stripping of textiles with hydroxyalkane sulfinates is achieved only due to the presence of an additional reducing agent, i.e., a sulfite anion. The Examiner completely neglects the fact, that a combination of hydroxy alkane sulfinate with ammonium ions results in only a medium increase of stripping power which is comparable to the one obtained by a combination of hydroxy alkane sulfinate with sodium sulfite (compare Table I, col. 4, Examples 3, 4 and 5 of Fono et al) and that a significant increase of stripping power occurs only if hydroxy alkane sulfinate is used together with ammonium ion and sodium sulfite (compare Table I, Examples 4 and 5, on one hand with Examples 6, 7 and 8, at the other).

Even if one considers the general knowledge of a person skilled in this art, one would not assume that the combined use of hydroxyalkane sulfinate and ammonium ion renders obvious the use of amino alkane sulfinate inasmuch as a hydroxy alkane sulfinate does not react with ammonium ions to form aminoalkanesulfinates. Even Fono teaches away from

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this assumption, i.e. at col. 2, lines 67-68 where it is clearly disclosed that the reducing agent in his process is a hydroxyalkane sulfinate, activated by a combination of sulfite and ammonium ions (col. 2, lines 47-50).

In any event, the Examiner additionally relies on Beckmann et al. in order to assertedly make obvious the use of an aminoalkane sulfinate as defined in the claims, a different aminoalkyl sulfinate than in Fono, for the claimed different and nonanalogous effect, i.e., as a post-cleaning material for dyed or printed textile materials.

It is submitted that combining these divergent teachings of the references is contraindicated by the art, no motivation or incentive thereof being present. As so acknowledged by the Examiner, motivation must be present for the artisan to combine the teachings of the references. Such manifestly is lacking here. Specifically, one desiring only controlled partial decolorization of printed textile materials would not employ conditions and materials effective for stripping, as in Fono. Certainly, he would be dissuaded from so doing and such would be contraindicated.

While Beckmann et al. teach aminoalkane sulfinates of the formula as claimed, certainly one skilled in this art would not be taught thereby to use them in the system of Fono for a different purpose and effect, nor would such effect be expected. It is only in light of Applicants' teachings that this becomes obvious. Such, however, manifestly is not basis for the indicated rejection.

It is also pointed out to the Examiner, that artisans have made efforts to develop cleaning agents which do not impair color depth, brilliance and shade of color to textile material. Why would one therefore use a cleaning agent which is able to attack and destroy the coloring matter within the fiber of that textile material for the controlled partial decolorization of printed textile material as claimed? No reason thereof manifest is present.

Accordingly, withdrawal of the rejection of the claims under 35 U.S.C. § 103 over Fono in view of Beckmann et al. is requested.

With regard to Olip et al., additionally relied upon in the rejection of Claim 13, the following is submitted.

Olip et al. is relied upon only for asserted obviousness of the additional feature of an aftertreatment with hydrogen peroxide.

Olip et al.'s process provides a denim material which has a stylish grey cast. Such material is obtained by treating a denim ware, whose warp yarn has been dyed by indigo or indigo derivatives and, optionally, additionally by a sulfur dyestuff, with a bleaching agent consisting of an alkaline mixture of formamidine sulfinic acid and a reducing carbohydrate. (Abstract). At the end of the bleaching procedure a plurality of rinsing operations are carried out in order to remove excess of alkali and of reducing agent from the treated fiber material. In order to completely neutralize any alkali and to oxidize any residual reducing agent it is recommended, in at least one of the rinsing operations, to add 0.1 to 2% acetic acid and 1 to about 3% of  $H_2O_2$  to the rinsing water.

Concededly, the process of Olip et al. is used in an aftertreatment operation following the production of denim textile material. However, Olip et al. merely discloses, that any excess of reducing agent is removed from the textile material by the oxidative action of the  $H_2O_2$  (col. 6, lines 27-36).

Using  $H_2O_2$  at the end of the process of the present invention, however, results, very surprisingly, in removal of any slight blue staining of uncolored threads or uncolored parts particularly somewhat hidden or covered parts of denim clothing, e.g., inside pockets of blue jeans. This result clearly is unexpected since this removal of indigo deposits occurs at the end of the claimed process even though  $H_2O_2$  alone is not capable of lightening indigo

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dyeings. The results are completely different, and unexpected particularly in combination with the claimed lightening process from the disclosure of any of the cited references.

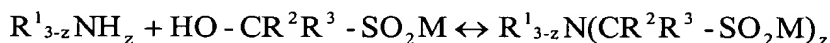
Consequently, withdrawal of this rejection of Claim 13 under 35 U.S.C. § 103 is requested.

With regard to the rejection of Claims 5 and 14 under 35 U.S.C. § 112, the following is submitted.

Claim 5 has been amended in a manner as kindly suggested by the Examiner so as to obviate the reason for his rejection.

Claim 14, similarly, has been amended to make it consistent with the disclosure, particularly defining this particular embodiment of the invention. Specifically, the aqueous system defined by this claim comprises three reactants:

- 1) compounds of the formula I,
- 2) the amine or the hydroxylamine of the formula  $R^{1}_{3-z}NH_z$ , and
- 3) a hydroxy alkane sulfinate of the formula  $HO-CR^2R^3-SO_2M$ ,  
optionally further assistant being present.



The claim, so amended, manifestly is not “incomprehensible”, as asserted by the Examiner.

Withdrawal of the rejection of the claims under the second paragraph of 35 U.S.C. § 112 thus is requested.

Should any further amendment to the claims be considered necessary by the Examiner, she is requested to contact the undersigned by telephone so that mutually agreeable language be arrived.

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It is submitted that this application is now in condition for allowance and which is solicited.

Respectfully Submitted,

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